

Services Received by Maryland Residents in Facilities Directed by a Psychiatrist

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A PSYCHIATRIC case register provides a routine linkage of psychiatric reports from a defined set of facilities for all residents of a geographic area. The device makes possible the study of patterns of utilization of these services on a person-by-person basis. Such "person statistics" contrast with mental health statistics which are limited to single events, such as admissions or discharges (1, 2) and do not include systematic followup information.

In previous reports (3, 4) we described the methodology used in the Maryland statewide case register and presented data on psychiatric care being received by Maryland residents as of July 1, 1961 (5). The purpose of this paper is to demonstrate how the register can be used to provide unique data on a set of measures related to morbidity from mental illness for a defined population group for a 1-year period. First, factors are derived for converting counts of psychiatric admissions to number of persons admitted; based on such counts, corrected rates of admission to psychiatric care are presented. Second, we present the total psychiatric morbidity experience during a year for the study population, including that of persons under

care carried over from the preceding year (1-year prevalence). The number of inpatient and outpatient episodes and days of care per person per year are also shown.

Our data are based on reports from virtually all of the 63 outpatient and 31 inpatient psychiatric facilities in Maryland and the adjacent District of Columbia. Not included are data from private psychiatric practice or from community mental health agencies not under psychiatric direction.

Converting Admissions to Persons Admitted

Number of admissions. Each admission to a psychiatric facility may represent a variety of services, such as the application process, other screening procedures, evaluation and diagnosis, treatment, and referral to other community agencies. The number of admissions in a year is an important measure, therefore, of the volume of services provided by psychiatric facilities in a community.

The 22,100 admissions to all types of psychiatric facilities reported to the register for the period July 1, 1961–June 30, 1962, includes all admissions to clinics and hospitals within the State and about 700 admissions of Maryland residents to District of Columbia facilities. It excludes returns to State mental hospitals from long-term leave. If a person attended a clinic or other inpatient facility while on long-term hospital leave, however, such an action was counted as a separate admission.

Of the total admissions, 1,500 were for non-residents admitted to Maryland facilities; these

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nonresidents are excluded from all further analyses presented here.

About 48 percent (9,906) of the admissions were to inpatient facilities and 52 percent (10,717) to outpatient facilities. Tables 1 and 2 show distributions of admissions by type of facility and major diagnoses.

Number of individuals and multiple admissions. The number of different individuals represented by these admissions is important for community planning since persons with multiple admissions may account for a substantial part of the total admissions. The psychiatric case register makes it possible to translate the number of admission actions into the number of individuals admitted.

We might look first at inpatient and outpatient admissions separately. From our register we find that, because of multiple inpatient admissions for the same person, the 9,906 inpatient admissions of Maryland residents in fiscal 1962 are accounted for by only 8,537 persons. The ratio of 8,537 to 9,906 provides us with a correction factor of 0.86 for inpatient admissions. Thus the correction factor may be defined as a factor which will convert the number of admissions to the number of individuals admitted. Similarly the ratio of 9,915

Maryland residents admitted in fiscal 1962 to outpatient facilities to the 10,717 such admissions provides an outpatient admission correction factor of 0.92. (The correction factor $\times 100$ may also be interpreted as the number of persons per 100 admissions. The reciprocal of the factor represents the number of admissions per person admitted, for example, $1/0.86=1.16$. The complement of the factor $\times 100$, here 14 percent, represents the percent duplication in the admission count. That is, the lower the value of the correction factor, the higher the percent duplication.)

To obtain a corrected count of persons admitted to any psychiatric facility, whether inpatient or outpatient, account must be made of 1,737 Maryland residents admitted to both inpatient and outpatient facilities in fiscal 1962. If we count these 1,737 persons only once, according to the facility they first contacted (853 were admitted first to an outpatient facility, 884 first to an inpatient facility), the total number of individuals admitted is further reduced from the sum of 8,537 inpatients and 9,915 outpatients (or a total of 18,452) to 16,715. The ratio of 16,715 persons admitted to any psychiatric facility to the total number of admissions (20,623) represents an overall correction

Table 1. Capacity of psychiatric facilities and admissions of Maryland residents, by type of facility, Maryland psychiatric case register, fiscal 1962

Type of facility	Bed capacity	Total admissions	Unduplicated count of persons	Correction factor ¹
All psychiatric facilities.....	-----	20, 623	² 16, 715	0. 810
Inpatient facilities.....	13, 513	9, 906	² 8, 537	. 862
State hospitals ³	10, 788	6, 382	5, 769	. 904
Private hospitals.....	1, 287	1, 587	1, 501	. 946
General hospitals ⁴	⁵ 163	1, 553	1, 369	. 881
Veterans Administration hospital.....	1, 275	384	380	. 989
Outpatient facilities.....	-----	10, 717	² 9, 915	. 925
State mental hospital clinics.....	-----	2, 289	2, 119	. 926
Baltimore City clinics.....	-----	3, 870	3, 621	. 936
County clinics.....	-----	3, 943	3, 808	. 966
Veterans Administration clinics.....	-----	363	341	. 939
Clinics in District of Columbia.....	-----	252	249	. 988

¹ Ratio of unduplicated count of persons admitted to designated class of facility to total number of admissions to such facilities (factor which will convert the number of admissions to number of persons admitted).

² Numbers do not add because individuals were admitted to more than 1 class of facility.

³ Includes an institution for the mentally defective with bed capacity of 2,472, for which total admissions as well as the unduplicated count of persons admitted fiscal 1962 was 281 (giving a correction factor of 1.000).

⁴ Includes 3 general hospitals in District of Columbia.

⁵ Estimated since some general hospitals with psychiatric programs do not have distinct psychiatric wards.

Table 2. Percent distribution of admissions of Maryland residents to psychiatric facilities, by major diagnosis and type of facility, Maryland psychiatric case register, fiscal 1962

Type of facility	Major diagnosis ¹								Percent alcoholism disorders
	Brain syndromes	Psychotic disorders	Psychophysiological disorders	Psychoneurotic disorders	Personality disorders	Transient situational personality disorders	Mental deficiency	Without mental disorder	
Total facilities.....	14.7	28.6	0.5	15.8	18.1	8.5	3.9	1.1	12.1
Inpatient facilities.....	19.7	33.8	(²)	14.4	16.7	2.0	1.4	.3	18.8
Public mental hospitals.....	27.2	32.2	.1	6.5	22.6	2.4	1.9	.3	27.3
Private psychiatric hospitals.....	11.1	40.2	0	21.0	10.6	1.7	1.2	.1	8.0
General hospitals.....	5.9	22.3	0	33.0	6.4	1.6	0	.1	6.3
Perry Point Veterans Administration.....	11.5	52.8	0	21.6	6.4	.1	.3	.9	5.7
Outpatient facilities ³	8.9	22.6	1.1	17.6	19.7	16.2	6.9	2.0	4.2
County clinics.....	4.7	10.9	.7	14.2	24.9	27.9	11.0	3.4	2.1
Public hospital clinics.....	24.2	51.2	.1	5.7	5.8	4.7	7.2	.2	6.0
City clinics.....	5.4	18.0	1.7	24.2	23.1	12.1	3.6	2.0	6.0
Baltimore Veterans Administration clinic.....	7.3	40.6	5.5	40.6	5.2	.3	.3	0	.9
Clinics of the District of Columbia.....	5.0	14.3	.7	28.7	21.9	16.5	.4	.4	.7

¹ The major diagnoses do not add to 100 percent because of cases reported without diagnosis.

² Less than 0.05.

³ Estimated from termination data for year since diagnosis is usually not reported at admission.

factor of 0.81. The corrected count of 16,715 patients represents a rate of 5.2 persons admitted per 1,000 population, as contrasted with the uncorrected rate of 6.4.

Correction factors by type of inpatient and outpatient facility are shown in table 1. Multi-

Table 3. Percent distribution of Maryland residents admitted to psychiatric facilities, by number of admissions, Maryland psychiatric case register, fiscal 1962

Type of patient	Total residents	Percent distribution by number of admissions			
		1	2	3	4 or more
Total....	16,715	82.1	13.9	3.1	0.9
Only inpatient....	6,800	88.1	9.6	1.8	.5
Only outpatient.....	8,178	94.5	5.1	.4	0
Inpatient and outpatient....	1,737	0	71.8	21.3	6.9

ple admissions were relatively frequent to general hospitals and to State facilities. A substantial number of patients were admitted to more than one type of hospital during the year. Eighteen percent of the patients had 2 or more psychiatric admissions; 4 percent had 3 or more (table 3).

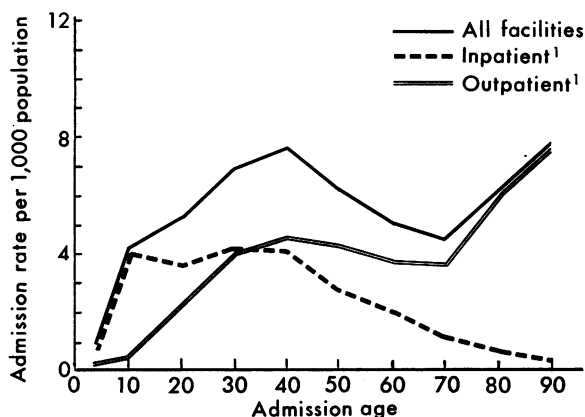
Correction factors by patient characteristics. The relative frequency of multiple admissions is directly related to the patient's place of residence and other demographic characteristics, such as age, sex, and color (table 4). In this analysis, Maryland (estimated 3.2 million population as of July 1, 1962) is divided into 3 principal geographic areas: (a) Baltimore City (0.9 million); (b) 4 metropolitan counties designated as suburban—Baltimore, Anne Arundel, Montgomery, and Prince Georges (1.5 million population); and (c) the remaining 19 nonmetropolitan counties designated as rural (0.8 million).

Use of several facilities is more likely in urban centers, in part because a large number and

variety of psychiatric resources are more readily accessible. For admissions of Baltimore City residents, the correction factor was 0.78. Comparable figures were 0.81 for residents of the 4 suburban counties and 0.88 for the rest of the State. The smaller correction factor for Baltimore City residents than for suburban residents reflects principally the city residents' greater use of both inpatient and outpatient resources. Fourteen percent of Baltimore City residents admitted during fiscal 1962 were seen both at an outpatient clinic and an inpatient facility, compared to only 9 percent of suburban residents admitted and 6 percent of rural residents.

For the very young and the very old, second or third admissions during the year were relatively rare. In contrast, during middle adult years multiple admissions were relatively frequent. During middle adulthood both inpatient and outpatient facilities tended to be used (fig. 1), whereas the very young were likely to use outpatient facilities only, and the very old, inpatient facilities only. The outpatient experience usually came first if a young person was admitted as both an inpatient and outpatient. For ages below 18 years, there was a relatively large change in the inpatient rate, but

Figure 1. Age-specific admission rates to psychiatric facilities by type of facility, Maryland psychiatric case register, fiscal 1962



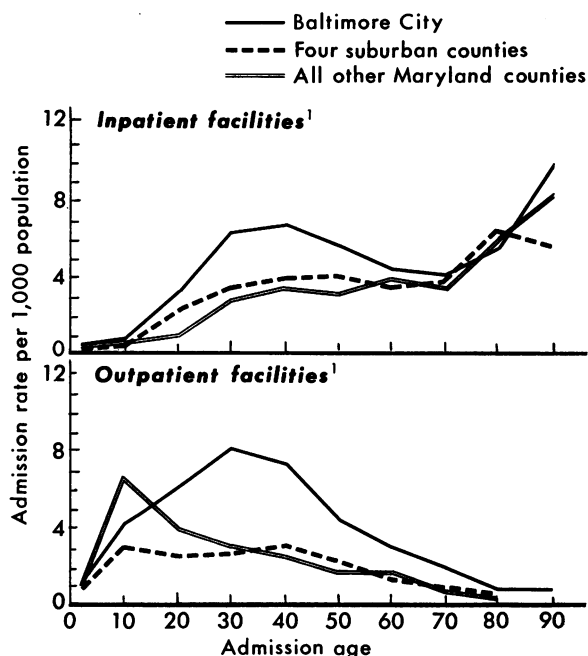
¹ Includes persons admitted to both inpatient and outpatient facilities.

little change in the outpatient rate when only the first contact was counted (table 4). More than 180 children were admitted to outpatient facilities before they were admitted to inpatient facilities, compared with only 45 children admitted in reverse order. Thus, in relation to hospital cases, at younger ages the psychiatric

Table 4. Correction factors for conversion of admissions to persons admitted, for same type facility and for first facility contacted, Maryland psychiatric case register, fiscal 1962

Characteristics	Same type facility		First facility contacted		
	Inpatient	Outpatient	All	Inpatient	Outpatient
All persons.....	0.86	0.92	0.81	0.78	0.84
By residence:					
Baltimore City.....	.87	.90	.78	.74	.81
4 suburban counties.....	.83	.93	.81	.78	.84
Other counties.....	.91	.96	.88	.84	.91
By age:					
0-9 years.....	.98	.96	.92	.61	.95
10-17 years.....	.94	.95	.89	.66	.93
18-44 years.....	.84	.90	.77	.76	.79
45-64 years.....	.84	.92	.78	.78	.78
65 years and over.....	.94	.93	.90	.92	.81
By sex and color:					
White:					
Male.....	.83	.94	.81	.75	.86
Female.....	.87	.91	.81	.80	.82
Nonwhite:					
Male.....	.90	.92	.81	.77	.84
Female.....	.95	.92	.81	.80	.82

Figure 2. Age-specific admission rates to psychiatric facilities by type of facility and place of residence, Maryland psychiatric case register, fiscal 1962



¹ Includes persons admitted to both inpatient and outpatient facilities.

outpatient clinic represented primarily a pre-admission service, while for older persons the clinic frequently also represented an aftercare service.

There were no consistent sex-color differences over any part of the age span in multiple admissions. Relatively fewer females and nonwhites, however, were admitted to an inpatient facility more than once (table 4).

Corrected Admission Rates

Corrected admissions were used to compute admission rates to psychiatric facilities by age and other characteristics (fig. 1-3).

The outpatient rate declined consistently after age 40 in contrast to the inpatient rate, which remained at a plateau from age 40 till 70 and then increased sharply (fig. 1).

The sum of the outpatient and inpatient rates after correction for persons admitted to both types of facilities provides the total psychiatric admission rate. This rate increased from early

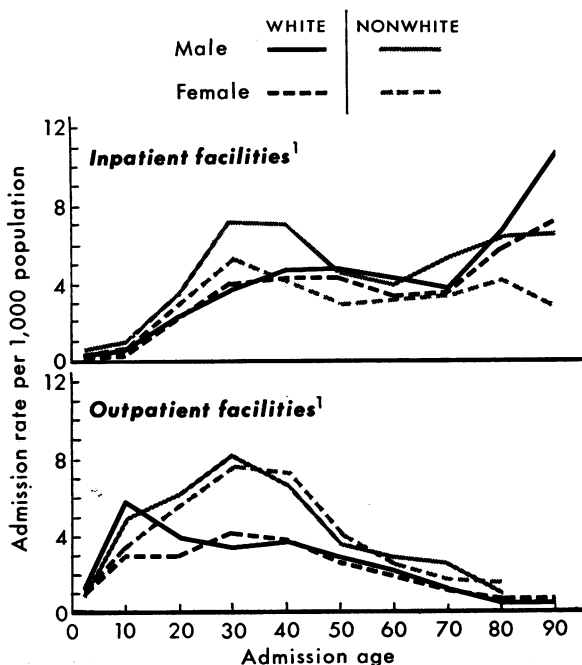
life to age 40; at age 40 almost 8 of every 1,000 Maryland residents represented a psychiatric admission. The rate declined thereafter to age 70 but in the ninth decade again reached a peak.

Geographic area differences. Principal suburban-rural differences (fig. 2) were: (a) relatively high outpatient admission rates for children in the rural counties, reflecting in part testing and evaluation services in clinics in the absence of other, more suitable, facilities (6); (b) persistently higher rural than suburban outpatient rates until age 35 (greater use probably being made of private psychiatrists in the suburbs), and (c) generally higher suburban inpatient rates.

In the suburban and rural areas, outpatient rates were highest at age 10; in Baltimore City, they were highest at age 30 (about 2½ times greater than noncity rates at this age). Adult inpatient rates also were much higher in Baltimore City than elsewhere.

The higher adult rates for Baltimore City may have been caused in part by (a) the con-

Figure 3. Age-specific admission rates to psychiatric facilities by type of facility and by color and sex, Maryland psychiatric case register, fiscal 1962



¹ Includes persons admitted to both inpatient and outpatient facilities.

tinuing net out-migration to the suburbs, which is selective with regard to health and socioeconomic factors, (b) differences in housing density and living conditions, cultural attitudes and patterns, and receptivity to psychiatric care, differences which also may be related to the socioeconomic class, and (c) the concentration of a large proportion of the State's available psychiatric resources in the Baltimore area.

Sex and color differences. Some major differences in admission rates by sex and color (table 5 and fig. 3) were: (a) higher rates for males than females, especially in childhood but also in adulthood, with the exception that admission rates to private and general hospitals were higher for women; (b) relatively low rates for nonwhite boys and girls in Baltimore City; and (c) in all areas, relatively high non-white adult rates.

The very high adult admission rates for non-whites for the total State (fig. 3) is partly associated with the high proportion of nonwhites (63 percent) who live in Baltimore City where, as mentioned, psychiatric admission rates were high for all adult groups.

Persons Under Care During a Year

In addition to providing corrected admission rates, a register may be used to derive various other morbidity measures (7,8). A few measures are readily available from records cumulated for 1 year. For example, it is important for complete assessment of a community mental health program to determine how many persons have had at least one episode of psychiatric service during the year under study (including patients carried over from the preceding year). See schematic diagram of types of patterns of utilization of psychiatric facilities by Maryland residents during fiscal 1962 (fig. 4).

Table 5 and figure 4 illustrate how this quantity (1-year prevalence) can be derived from the register. About 20,600 Maryland residents were under care of psychiatric facilities on July 1, 1961 (5). Of the 16,700 persons admitted during fiscal 1962, 14,400 entered care during the year (that is, had not been under care on July 1, 1961). The 20,600 plus 14,400 residents entering care during fiscal 1962 provides a total count of 35,000 persons who were under care sometime during that year. Thus the 1-day

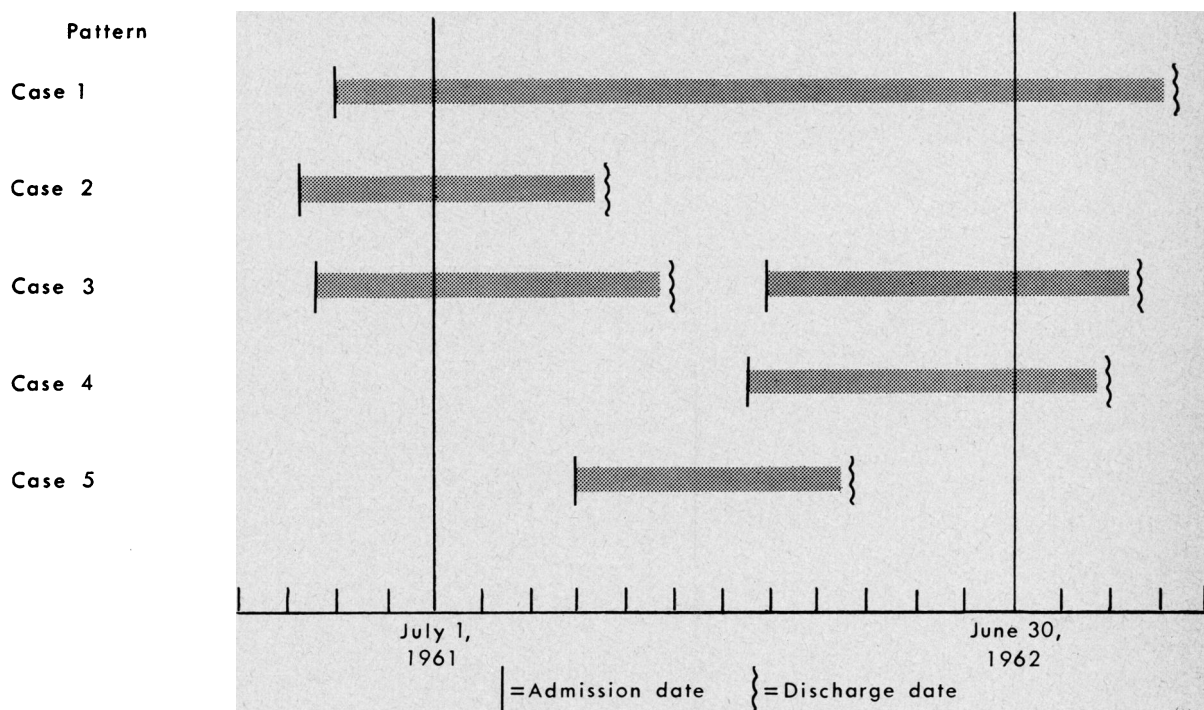
Table 5. Maryland residents receiving psychiatric care, by sex and color, Maryland psychiatric case register, fiscal 1962

Summary of activity	Number					Number per 1,000 population ¹				
	Total	White		Nonwhite		Total	White		Nonwhite	
		Male	Female	Male	Female		Male	Female	Male	Female
On rolls of psychiatric facilities, July 1, 1961 -----	20, 630	8, 514	7, 745	2, 287	2, 086	6. 37	6. 40	5. 71	8. 41	7. 46
Admitted and readmitted to psychiatric facilities, fiscal 1962:										
Total -----	16, 715	7, 240	6, 063	1, 855	1, 557	5. 16	5. 44	4. 47	6. 82	5. 57
Inpatient facilities ² -----	8, 537	3, 609	3, 361	910	657	2. 63	2. 71	2. 48	3. 35	2. 35
Outpatient facilities ² -----	9, 915	4, 293	3, 309	1, 189	1, 124	3. 06	3. 22	2. 44	4. 37	4. 02
Entering under care (not on rolls July 1, 1961) -----	14, 363	6, 319	5, 218	1, 547	1, 279	4. 43	4. 75	3. 84	5. 69	4. 58
Inpatient facilities ² -----	7, 641	3, 191	3, 103	775	572	2. 36	2. 40	2. 29	2. 85	2. 05
Outpatient facilities ² -----	8, 203	3, 690	2, 637	975	901	2. 53	2. 77	1. 94	3. 59	3. 22
Readmitted to care (on rolls July 1, 1961) -----	2, 352	921	845	308	278	. 73	. 69	. 62	1. 13	. 99
Inpatient facilities ² -----	896	418	258	135	85	. 28	. 31	. 19	. 50	. 30
Outpatient facilities ² -----	1, 712	603	672	214	223	. 53	. 45	. 50	. 79	. 80
Total under care, fiscal 1962 -----	34, 993	14, 833	12, 963	3, 834	3, 365	10. 80	11. 14	9. 55	14. 10	12. 04

¹ Based on population estimates as of July 1, 1962. Not age-adjusted; (figures are of same relative magnitude when age adjustment is made).

² Includes persons admitted to both inpatient and outpatient facilities.

Figure 4. Patterns included in 1-year-prevalence count, illustrating utilization by Maryland residents of psychiatric facilities, Maryland psychiatric case register, fiscal 1962



NOTE: Modified from Dorn (7). Cases 1, 2, and 3 are included in the 1-day-prevalence count for July 1, 1961. Only cases 4 and 5 are included in the count of persons entering care during the next 12 months from that date.

or point-prevalence ratio (6.4 per 1,000 population) plus the rate at which persons entered care during fiscal 1962 (4.4 per 1,000), a type of incidence, provides the 1-year-interval prevalence ratio of 10.8 per 1,000 for fiscal 1962.

These data are shown by age and sex for all Maryland and Baltimore City in table 6. The 1-year-prevalence ratio was almost twice as high in Baltimore City as in the suburban and rural areas (16.2 compared with 8.6). Associated with this difference is the relatively high 1-day-prevalence ratio in Baltimore City (10.5), which was almost twice the rate entering care (5.8). In the counties, in contrast, the 1-day prevalence ratio (4.7) and rate entering care (3.9) were equivalent. These data suggest that average duration of care in psychiatric facilities is much greater for Baltimore City residents than for county residents.

We might now look separately at the number of persons who were hospitalized or received outpatient care during fiscal 1962 and the number of episodes and days of care, that is, under-

take to determine prevalence ratios for hospitalization and for clinic treatment.

Patients hospitalized and bed-days. Of the 35,000 persons under psychiatric care during fiscal 1962, 21,300 were inpatients at least once during the year: 12,600 of these were hospitalized on July 1, 1961; 8,700 others were either admitted or returned from long-term leave during fiscal 1962.

Only 4 percent of the 21,300 had a total hospital stay of less than a week (table 7); 32 percent were resident for less than 3 months. Forty-four percent were in the hospital for the entire fiscal year 1962.

Altogether, a total of 4.7 million bed-days were accounted for, an average (mean) of 221 days per person (table 8). About 87 percent of these bed-days were provided by State facilities. Both the mean bed-days per person and the proportion accounted for by State hospitals were somewhat higher for nonwhites than for whites.

The 21,300 inpatients had 24,000 hospitalizations during fiscal 1962, or an average of 1.13

hospital episodes per patient. Included were hospitalizations continued from fiscal 1961, new admissions and readmissions, direct transfers between hospitals, and returns from long-term leave.

Persons with only one episode tended to have had either a short hospital stay or were resident the entire year, whereas those with multiple episodes were more likely to have had a total resident stay of more than 1 but less than 12 months. Persons with multiple episodes had a relatively high proportion of their bed-days in non-State facilities, most likely a reflection of transfers from non-State to State facilities (9).

If we delineate 3 groups of inpatients: (a) 9,900 admitted before July 1, 1960, and still in the hospital on July 1, 1961, (b) 2,700 admitted between July 1, 1960, and June 30, 1961, and still in the hospital, July 1, 1961, and (c) the remaining 8,700 inpatients, hospitalized after July 1, 1961, we find some important differences.

The first group, those who had been hospitalized the longest on July 1, 1961, had a mean stay of 339 days in fiscal 1962 (table 9); 85 percent were in the hospital for all of fiscal 1962; 92 percent of their bed-days were in State facilities; and the average number of inpatient episodes per person during fiscal 1962 was only 1.04.

The second group had a lower mean stay (223 days); only 37 percent were hospitalized all of fiscal 1962; a smaller proportion (77 percent) of their bed-days were in State facilities; and there were 1.23 episodes per person.

None of the third group, the newly hospitalized, could have been inpatients for all of fiscal 1962, for they could have been hospitalized only for the days remaining in the year after date of admission. Nevertheless these persons averaged as many as 1.20 inpatient episodes per person; 74 percent of their bed-days were in State facilities.

Clinic patients and clinic days. Looking at outpatient care, we find that only 14,900 Maryland residents were enrolled in an outpatient psychiatric facility during fiscal 1962 (table 7). This includes more than 5,900 persons on clinic rolls on July 1, 1961, plus 9,900 others subsequently admitted to clinic service. Thus, because of the greater patient turnover in clinics, annual clinic admissions exceeded 1-day clinic

Table 6. One-year prevalence ratios of psychiatric patients of Maryland by sex, age, and geographic area, per 1,000 population,¹ Maryland psychiatric case register, fiscal 1962

Sex and age group	1-day (point) prevalence ²	Enter- ing care during year ³	Total 1-year (inter- val) prev- alence
Maryland			
All patients.....	6. 37	4. 43	10. 80
Males.....	6. 74	4. 91	11. 64
0-14 years.....	3. 17	3. 68	6. 85
15-44 years.....	7. 08	5. 73	12. 81
45-64 years.....	9. 69	5. 24	14. 93
65 and over.....	14. 14	5. 02	19. 16
Females.....	6. 01	3. 97	9. 97
0-14 years.....	1. 63	1. 96	3. 59
15-44 years.....	6. 36	5. 26	11. 62
45-64 years.....	9. 00	4. 30	13. 29
65 and over.....	14. 11	4. 52	18. 62
Baltimore City			
All patients.....	10. 46	5. 79	16. 25
Males.....	11. 39	6. 71	18. 10
0-14 years.....	3. 87	3. 49	7. 36
15-44 years.....	13. 05	9. 39	22. 44
45-64 years.....	15. 73	7. 03	22. 76
65 and over.....	19. 84	5. 30	25. 14
Females.....	9. 60	4. 95	14. 54
0-14 years.....	1. 84	1. 93	3. 77
15-44 years.....	10. 52	7. 13	17. 65
45-64 years.....	13. 62	5. 04	18. 66
65 and over.....	18. 85	4. 90	23. 75
Maryland counties			
All patients.....	4. 72	3. 88	8. 60
Males.....	4. 93	4. 21	9. 14
0-14 years.....	2. 92	3. 75	6. 67
15-44 years.....	4. 93	4. 41	9. 33
45-64 years.....	6. 82	4. 39	11. 20
65 and over.....	10. 87	4. 85	15. 72
Females.....	4. 50	3. 56	8. 06
0-14 years.....	1. 55	1. 97	3. 52
15-44 years.....	4. 74	4. 53	9. 27
45-64 years.....	6. 62	3. 92	10. 53
65 and over.....	11. 23	4. 29	15. 52

¹ Based on population estimates as of July 1, 1962.

² Persons on psychiatric rolls July 1, 1961.

³ Not on rolls July 1, 1961.

prevalence, the reverse of the situation for inpatient care.

The much briefer duration of outpatient care is further illustrated by the smaller median days of clinic enrollment per person than days in hospital (table 8). It should be noted that the count of clinic days during the year includes all days from admission to termination, including therefore time after the final patient interview up to the administrative closing of the case, the closing in many instances being 3 or more

months later. If such time were excluded, the average clinic stay would be far less (10). Also in a few instances, overlapping (duplicate) days of enrollment of an individual in more than one clinic at the same time were included.

A total of 2.4 million days on clinic rolls was accounted for. Whereas State mental hospitals accounted for 87 percent of bed-days, the aftercare clinics and preadmission clinics of these hospitals accounted for only 21 percent of

Table 7. Percent distribution of psychiatric inpatients and outpatients by number of days of hospital or clinic care and by sex and color, Maryland psychiatric case register, fiscal 1962

Period of care	Inpatients					Outpatients				
	Total (N= 21,323)	White		Nonwhite		Total (N= 14,882)	White		Nonwhite	
		Male (N= 8,675)	Female (N= 8,346)	Male (N= 2,385)	Female (N= 1,917)		Male (N= 6,624)	Female (N= 5,036)	Male (N= 1,646)	Female (N= 1,576)
Less than 1 week.....	4.1	4.3	4.8	2.1	2.5	8.2	7.7	7.0	12.8	8.9
1 week to 1 month.....	12.5	12.6	13.5	10.7	10.0	11.7	11.7	11.3	13.9	10.2
1-3 months.....	15.8	16.2	15.5	15.7	16.0	20.9	19.9	20.7	23.3	23.6
3-6 months.....	10.8	10.1	11.0	11.8	12.1	22.7	23.0	22.7	21.1	23.6
6-12 months.....	12.3	11.8	12.0	14.0	14.0	15.9	15.1	17.7	13.3	15.8
12 months.....	44.4	45.0	43.2	45.7	45.5	20.6	22.6	20.5	15.6	18.0

Table 8. Days and episodes of care of psychiatric inpatients and outpatients, by sex and color, Maryland psychiatric case register, fiscal 1962

Type of patient	Days of care			Percent days of care in—		Episodes	
	Total	Median	Average (mean) per patient	State facility	Other facility	Total	Average per patient
Inpatient.....	4,710,000	284	221	86.9	13.1	24,068	1.13
White:							
Male.....	1,915,000	288	221	82.1	17.9	9,868	1.14
Female.....	1,803,000	262	216	87.6	12.4	9,339	1.12
Nonwhite:							
Male.....	551,000	309	231	91.1	9.1	2,719	1.14
Female.....	441,000	305	230	99.1	.9	2,142	1.12
Outpatient ¹	2,398,000	129	161	21.2	78.8	16,355	1.10
White:							
Male.....	1,098,000	134	166	12.4	87.6	7,193	1.09
Female.....	834,000	136	166	24.2	75.8	5,582	1.11
Nonwhite:							
Male.....	223,000	91	135	31.4	68.6	1,838	1.12
Female.....	243,000	120	154	41.2	58.8	1,742	1.11

¹ Clinic days are number of days from date of clinic admission to date of termination.

clinic days. The remaining clinic days were accounted for by community clinics—such as those connected with local health departments and university medical schools or under other auspices.

Nonwhite outpatients, particularly male, averaged considerably fewer clinic days than whites, in contrast to nonwhites' higher average inpatient days. A greater proportion of clinic days of nonwhite than of white outpatients were accounted for by State aftercare clinics.

The 14,900 clinic patients enrolled during fiscal 1962 had a total of 16,400 clinic episodes during the year, or 1.10 episodes per patient.

As with inpatients, we can classify outpatients on clinic rolls on July 1, 1961, according to length of stay since admission to clinic care and observe their subsequent clinic experience (table 9). These data, comparable to the data on inpatients, suggest that, in general, the longer the patient had been under care, the greater the number of days of care he received during the subsequent year, fiscal 1962.

When categorized by date of admission, inpatients and outpatients did not differ appreciably in average number of days of care received during the study year (table 9). As compared with inpatients, however, relatively fewer of the outpatients had been admitted before July 1, 1960 (47 percent compared with 12) and relatively more were admitted after July 1, 1961 (41 percent compared with 61). Later admission accounts in part for the much lower median days for outpatients as compared with inpatients (table 8).

Discussion

In the assessment of psychiatric services provided by a community, a psychiatric case register yields information on multiple admissions during a given year and unduplicated rates of admission to psychiatric care. The correction factors thus derived for conversion of the number of admissions to the estimated number of individuals admitted may be used for other comparable areas with similar resources. It has been shown previously (5) that the overall correction factor for Maryland to be applied to psychiatric 1-day prevalence (that is, persons enrolled in psychiatric facilities on a specified

Table 9. Comparison of psychiatric inpatient and outpatient experience during year July 1, 1961–June 30, 1962, for patients under care at beginning of year, by period of admission, Maryland psychiatric case register, fiscal 1962.

Experience	Admitted before July 1, 1960	Admitted July 1, 1960–June 30, 1961
	Percent	
Patients under care entire year:		
Inpatients-----	85	37
Outpatients-----	77	43
Hospital days in State facilities:		
Inpatients-----	92	77
Outpatients-----	19	23
	Days of care	
Median during year:		
Inpatients-----	365	253
Outpatients-----	365	253
Average (mean) during year:		
Inpatients-----	339	223
Outpatients-----	316	224

day, namely, July 1, 1961), was 0.96, since there was only a 4 percent duplication in the prevalence count. For admissions during the year, however, the correction factor for fiscal 1962 was considerably lower (0.81). If we count only the 14,000 persons entering care during fiscal 1962 who were not under care on July 1, 1961, the admission correction factor decreases to 0.70. For the prevalence ratio for 1 year, the correction factor is 0.83. As register data accumulate over the years on the psychiatric history of Maryland residents, a variety of additional analyses will be possible. For example, data on persons who are reported to the psychiatric case register for the first time and have been in continuous residence in the State since onset of their illness will enable us to calculate the true incidence of mental disorder as diagnosed by inpatient and outpatient psychiatric facilities.

Psychiatric register data per se do not, however, measure total mental illness in a community. Some persons with psychiatric dis-

turbances will not come to a psychiatric facility during a particular period or perhaps will never come. Socioeconomic and other factors also affect the rate at which the mentally ill receive psychiatric services. Furthermore, a small proportion of those admitted to facilities are classified as without mental disorder (table 2).

We might at this point briefly compare our findings on psychiatric morbidity with the data reported from another psychiatric case register. In Monroe County, N.Y. (11), about as many persons entered psychiatric service during 1960 as were enrolled at the beginning of 1960 (about 8.5 per 1,000). In Maryland, however, rates of entry under care in fiscal 1962 were considerably lower, 4.4, than 1-day prevalence ratios, 6.4 (table 6). Differences in total rates between the two register areas are accounted for in part by the higher proportion of urban and older persons in Monroe County and by variations in reporting, such as inclusion of data from private practice in Monroe County and of data from facilities for the mentally retarded in Maryland. We plan to carry out more detailed comparative studies, making adjustments for differences between the two registers.

Our data suggest that the patient's current hospitalization requirements are related in part to past hospitalization experience. The long-stay hospital patient can be expected to require more hospitalization in the future than other patients. This finding must be re-examined more precisely through the use of cohort methods (12-14) and by taking into account diagnosis and other variables. The patient institutionalized because of mental deficiency, for example, would likely be hospitalized continuously during a year while the alcoholic would tend to have brief but multiple hospitalizations.

Certain comparisons between State, Veterans Administration, and community inpatient facilities are of interest (tables 1 and 2). The State hospitals, which have 80 percent of the beds, account for 87 percent of the bed-days but only 64 percent of the admissions. The dissimilarity results from a relatively low bed turnover and a high occupancy ratio. The Veterans Administration hospital had 9 percent of the beds and about 4 percent of the admissions. In contrast, the private and general hospital facilities, with only 11 percent of the beds, accounted for as

much as 32 percent of the admissions. Differences between hospitals in diagnostic distribution of admissions are also apparent.

Intensive studies of persons who received a relatively high proportion of service are suggested. What are the socioeconomic, demographic, and diagnostic characteristics of this group of persons? What is their pattern of utilization of facilities as to the length and type of treatment, disposition after treatment, and movement between facilities? What is their level of impairment? What are possible approaches to ameliorate their recurrent need for psychiatric care?

Turning to the use of psychiatric resources by race, we find some important differences. Admission rates are relatively high for non-white adults but relatively low for nonwhite children. Nonwhites tend to have a larger number of inpatient days per person but a smaller number of outpatient days. Relatively more of the nonwhite patients use State mental hospitals and aftercare clinics; fewer are treated in private facilities. These data confirm earlier cohort findings which show that clinic stay for nonwhite children and adults tends to be less than that for whites (15-16), in contrast to State hospital stays, where duration is greater for nonwhites (17). One may speculate whether social class and cultural attitudes account for the racial differences in duration of hospital and clinic care.

The data also indicate a possible lack of "balance" of psychiatric services of certain segments of the population and for some geographic areas. The relatively low rates of admission of males to private mental hospitals and to general hospital psychiatric services contrast with their high rates of admission to public mental hospitals. This contrast may reflect in part diagnostic differences between the sexes, such as the preponderance of male alcoholics and of female psychoneurotics, but economic factors, attitudes, and other causes also may be important. The relatively high rate of admissions of aged persons to State hospitals, 70 percent with a diagnosis of chronic brain syndrome but 85 percent with no previous hospitalization for mental illness, suggests the need to study use of alternative community services for the older person.

The data on psychiatric care presented encompass only a limited number of variables. Other patient characteristics such as marital status and diagnosis need to be examined. Services received in subsequent years by persons under care in fiscal 1962 will be reported as register data become available. From such longitudinal medical care records, supplemented by information to be collected in the future on type of treatment received and by data on the cost of providing various treatment services, estimates of the cumulative cost of treating various types of patients will eventually be possible.

Summary

Data from the first year's operation of a statewide psychiatric case register in Maryland were used as the basis for a variety of measures related to psychiatric care, such as unduplicated counts of individuals receiving psychiatric services, correction factors for computing admission rates and prevalence, combined inpatient and outpatient admission rates, 1-year-prevalence ratio, and number of episodes and days of hospital and clinic care per person per year by such patient variables as age, sex, color, place of residence, and type of facility. The data did not include reports from private psychiatric practice or from community mental health agencies not under psychiatric direction.

A statewide psychiatric case register can provide statewide and community data for the mental health program planner and administrator on the psychiatric services received by patients during a given 1-year period.

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